
BlueCastleHoldings
Energy. Infrastructure. Innovation.

Nuclear Power: Benefits

Nuclear generation provides major socio-economic benefits:

- Large and reliable base-load power generation
- Long-term electricity price stability
- Security of energy supply and fuel diversification
- Environmentally sound
- 800 - 1000 permanent jobs, 2500 during 7 years of construction

Nuclear Power: Challenges

- Perceived
  - Difficult licensing
  - Siting/Environmental
  - Cooling water
  - Used Fuel
  - Safety
- Real
  - Large initial capital costs

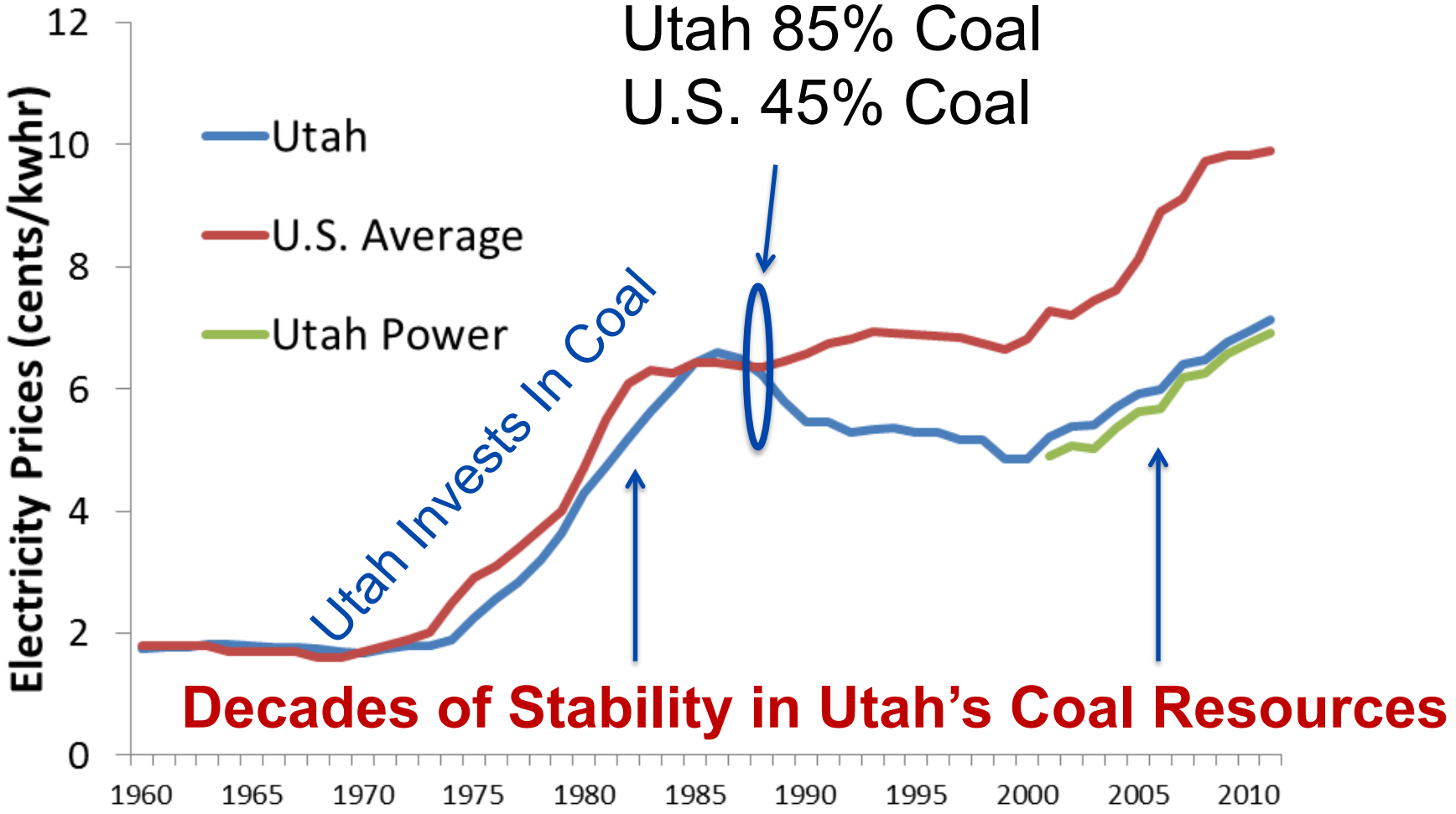
Reason For Utah's Historically Low Cost Electricity Supply

- Utah's current low-cost electricity is based on the deployment of large baseload coal power plants in the 70's and 80's, with significant margin.

- Utah's electrical complex produced abundant electricity supply, with stable low prices for decades.

- Those resources are now fully utilized. Utah and the Western US need the next large, long-term, reliable and economical base-load resource for growth.

Utah's Stable Electric Prices



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Creating Long Term Benefits For Utah

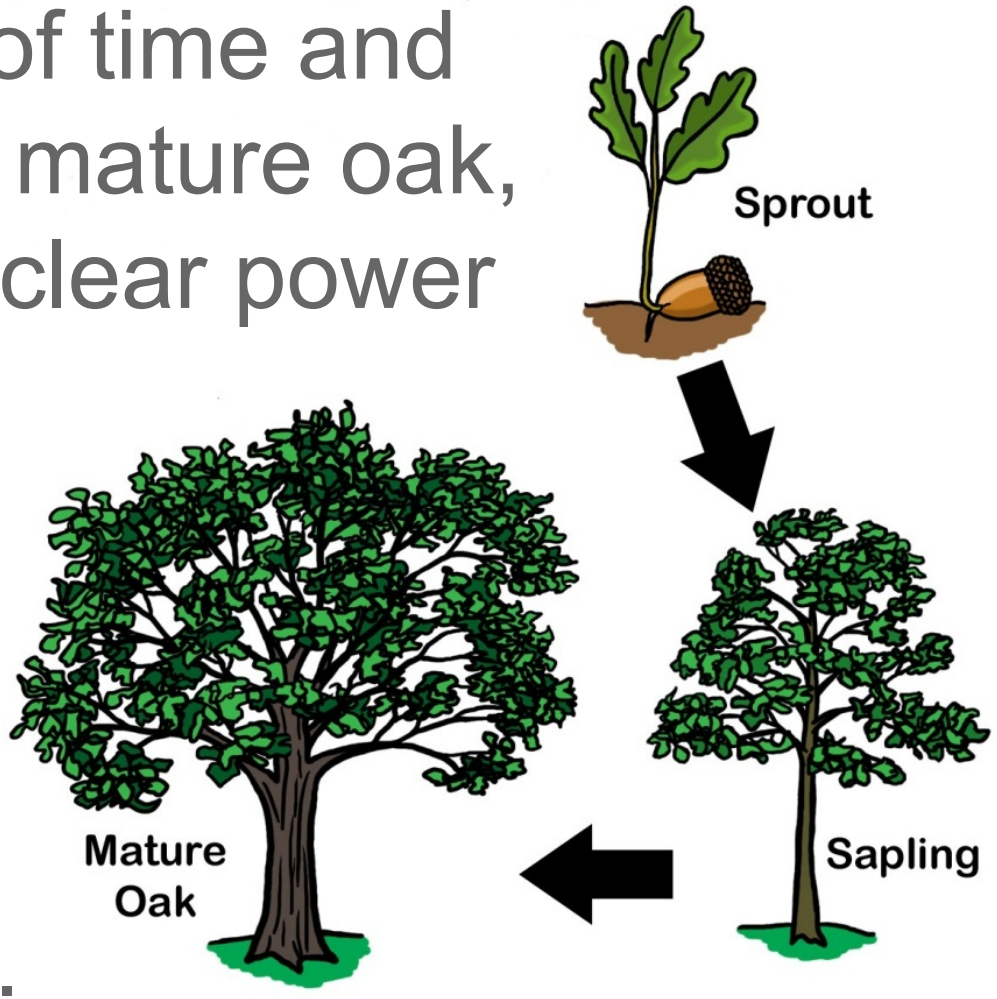
"Someone's sitting in the shade today because someone planted a tree a long time ago."

Warren Buffet

Nuclear Power 60 Year Life

Large investment of time and resources to get a mature oak, or an operating nuclear power plant!

BCH is now nurturing the Blue Castle Project sapling to maturity.



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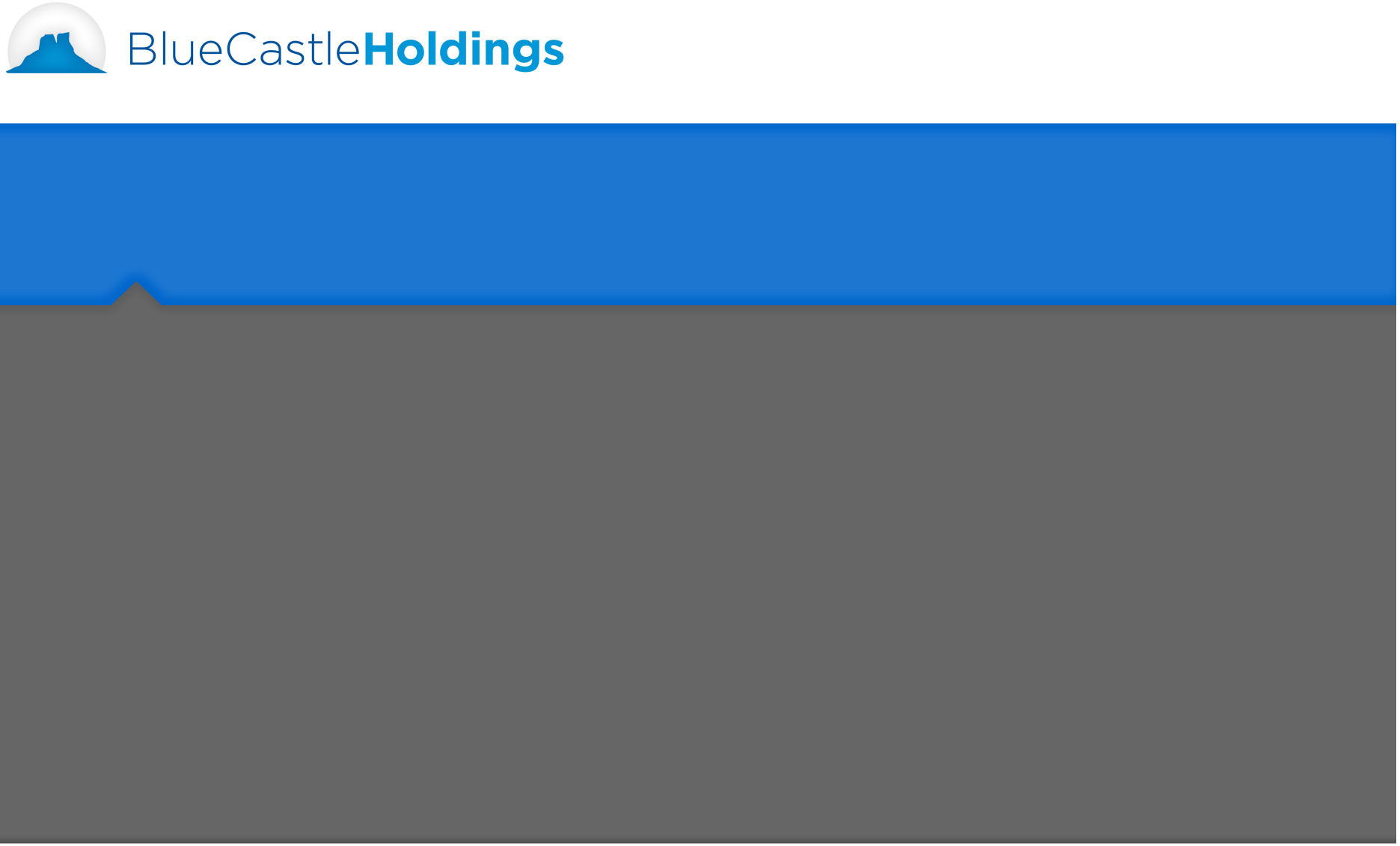
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Nuclear Power
Protecting the Environment

- Nuclear, small environmental footprint (Blue Castle footprint: ~ 1 sq mi)
  - Solar: ~ 90 sq mi (3/4 of Arches NP) or
  - Wind: > 600 sq mi (over 3 times size of Zion NP)

    …..to generate same BCP power

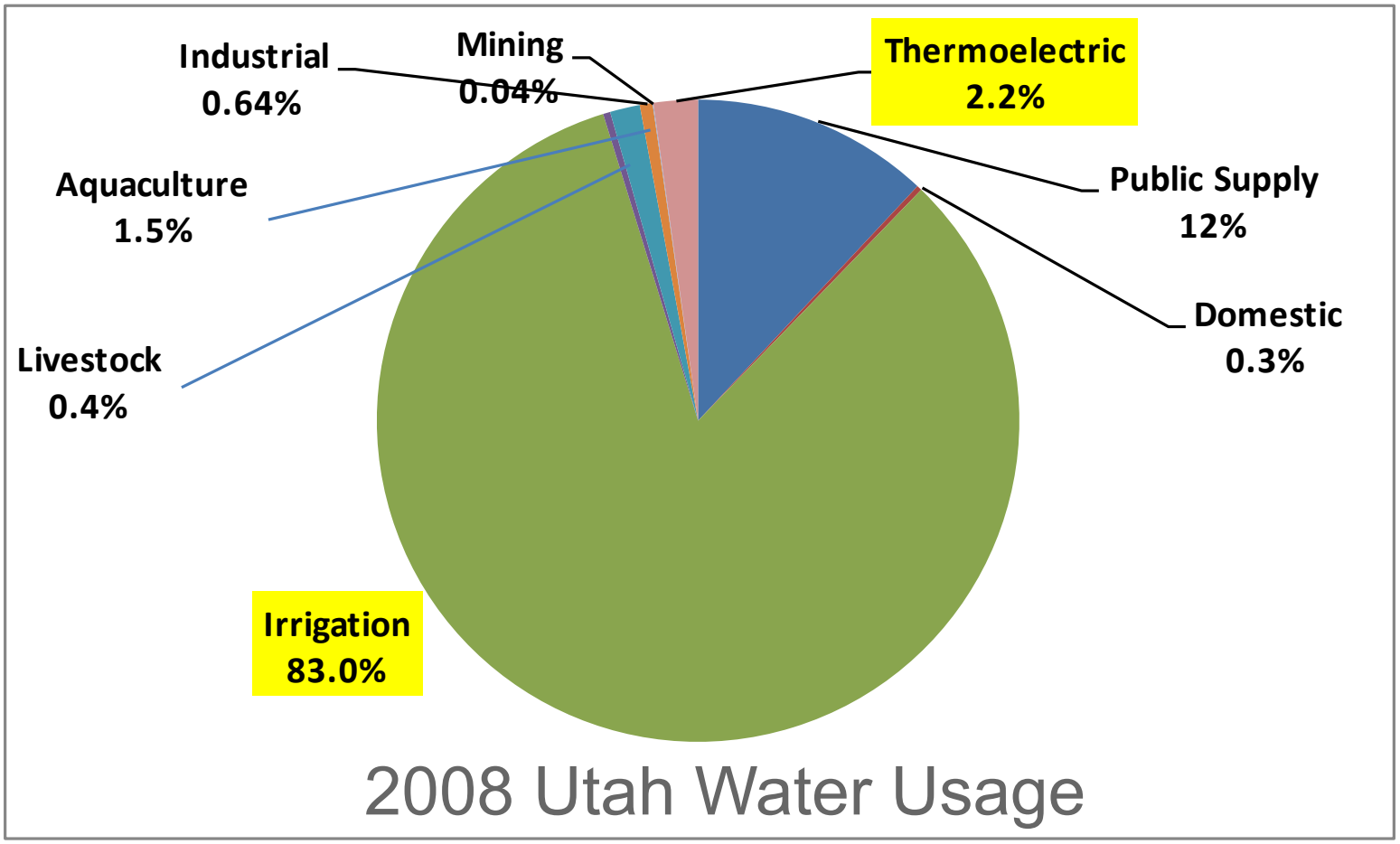
- Nuclear plants required to provide environmental stewardship of operations, including water use, protecting wildlife and their habitats

U.S. largest source of clean-air electricity

- The amount of nitrogen oxide emissions that US nuclear plants prevent annually is the equivalent of taking more than 28 million passenger cars off the road

Source: NEI

BCP - increase Utah's electric generation about 50% while increasing Utah's water use by less than 1%



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Blue Castle Project Water Use: Approved by the State of Utah

Kent Jones, State Water Engineer determined 1/12/12

- Water is available
- Would not interfere with other water users
- Proposed plan is physically and economically feasible
- Not detrimental to the public welfare and the environment.

Perceived Challenges to New Nuclear Generation

- Difficult **licensing**
  - New licensing processes are stringent yet tested and predictable
- Exhaustive/open **siting** process
  - Disciplined NEPA and all require reviews conducted under NRC established regulations
- Cooling **water** availability
  - increase Utah's electric generation about 50% while increasing Utah's water use by less than 1%

Small Amounts Of Waste

Used Nuclear Fuel

- About 95% of its energy remains to be reprocessed or recycled
- 1.7 million miles of U.S. shipments of used fuel with no resulting injuries, fatalities or environmental damage
- All used Blue Castle Project fuel after 60 years of operation, will fit on 1 ½ acres.
- The Nuclear Regulatory Commission - safe to store on site for 100 years or longer.

Safety Of Nuclear Power In the U.S.

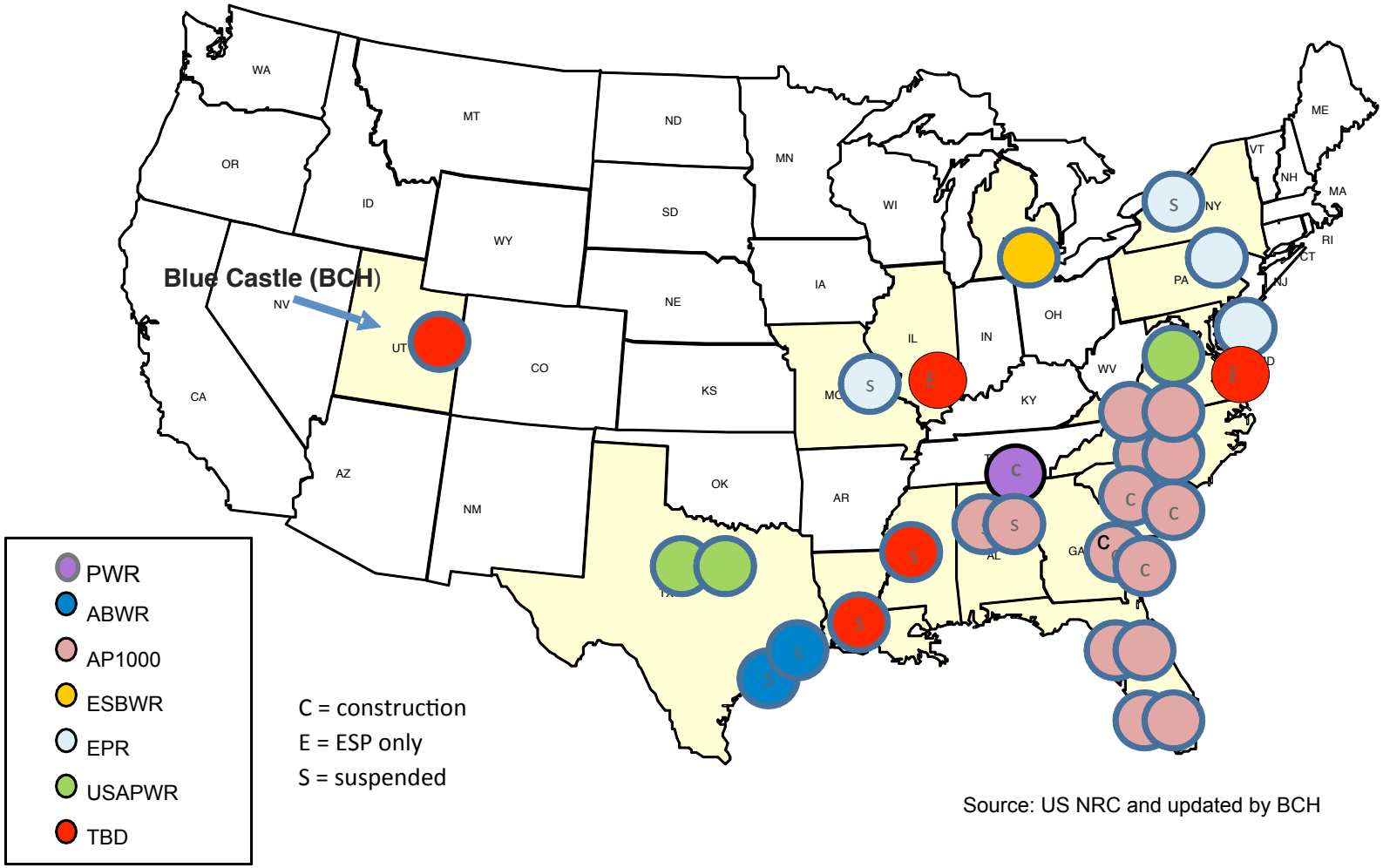
"Since commercial nuclear power plants began operating in the United States, there have been no physical injuries or fatalities from exposure to radiation from the plants among members of the U.S. public. Even the country's worst nuclear power plant accident at Three Mile Island resulted in no identifiable health impacts."

U.S. Nuclear Regulatory Commission (January 2009)

Primary Challenge to New Nuclear Deployment

- **Large initial capital costs**
- **Balanced and resolved by:**
  - By low, long term electric prices
  - New state policy - long term, large and abundant base load generation to enable stable electric prices
  - Clear procurement process similar to the current process for renewables

5 New Nuclear Units Under Construction In U.S



Source: US NRC and updated by BCH

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Nuclear Power Fits Utah's Values And Needs

- A 60 year large generating asset, with low production costs enabling:
- Unsurpassed cost predictability allows public and business assurance of growth planning.
- Sound economic practices, free market principles, secure energy supply and fuel diversity.
- Environmental stewardship and clean generation